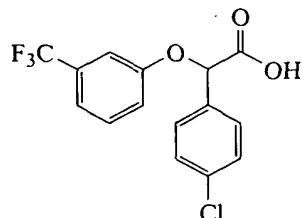


WHAT IS CLAIMED IS:

1 1. A method for producing an enantiomerically enriched α -
2 (phenoxy)phenylacetic acid compound of the formula:



3
4 wherein

5 R¹ is alkyl or haloalkyl, and

6 X is halide;

7 from an enantiomeric mixture of the α -(phenoxy)phenylacetic acid compound comprising a
8 first and a second enantiomers, said method comprising:

9 (a) producing a solution comprising a solid enantiomerically enriched
10 acid-base salt of the first enantiomer by contacting the enantiomeric mixture of the α -
11 (phenoxy)phenylacetic acid compound with less than 0.5 molar equivalents of an
12 enantiomerically enriched chiral amine compound under conditions sufficient to produce the
13 ratio of the amount of free first enantiomer to the amount of the free second enantiomer in the
14 solution is about 1 to 3; and

15 (b) separating the solid acid-base salt of the first enantiomer from the
16 solution at a temperature where the concentration of an acid-base salt of the second
17 enantiomer of the α -(phenoxy)phenylacetic acid compound is near or below its saturation
18 point.

1 2. The method of Claim 1, wherein said step (a) of producing the solution
2 comprising the solid enantiomerically enriched acid-base salt of the first enantiomer
3 comprises:

4 (i) heating the solution to a temperature above the nucleation temperature
5 of the first enantiomer; and

6 (ii) lowering the solution temperature to a temperature at or below the
7 nucleation temperature of the first enantiomer to produce the solid acid-base salt of the first
8 enantiomer.

1 3. The method of Claim 2, wherein said step (b) of separating the solid
2 acid-base salt of the first enantiomer is conducted at a temperature near or above a saturation
3 temperature of an acid-base salt of the second enantiomer.

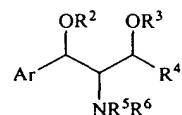
1 4. The method of Claim 1 further comprising recovering the chiral amine
2 compound by removing the chiral amine compound from the separated solid acid-base salt of
3 the first enantiomer.

1 5. The method of Claim 4, wherein the enantiomerically enriched chiral
2 amine compound used in producing the acid-base salt of said step (a) comprises the recovered
3 chiral amine compound.

1 6. The method of Claim 1 further comprising racemizing at least a
2 portion of the second enantiomer in the separated solution by contacting the second
3 enantiomer with a base.

1 7. The method of Claim 6, wherein the enantiomeric mixture of the α -
2 (phenoxy)phenylacetic acid compound used in said step (a) comprises a racemized α -
3 (phenoxy)phenylacetic acid compound.

1 8. The method of Claim 1, wherein the chiral amine compound is of the
2 formula:



5 each of R^2 and R^3 is independently hydrogen or alkyl; or R^2 and R^3 together
6 with atoms to which they are attached to form a heterocyclic ring moiety;

7 R^4 is hydrogen or alkyl;

8 each of R^5 and R^6 is independently hydrogen or alkyl, or one of R^5 or R^6 is an
9 amine protecting group; and

10 Ar is aryl.

1 9. A method for enantiomerically enriching (-)-4-chloro- α -(3-
2 trifluoromethylphenoxy)phenylacetic acid from an enantiomeric mixture of 4-chloro- α -(3-
3 trifluoromethylphenoxy)phenylacetic acid, said method comprising:

(b) separating the enantiomerically enriched acid-base salt from the solution which is enriched with (+)-4-chloro- α -(3-trifluoromethylphenoxy)phenylacetic acid; and

(c) removing (1R,2R)-2-amino-1-(4-nitrophenyl)-1,3-propanediol from the acid-base salt to produce enantiomerically enriched (-)-4-chloro- α -(3-trifluoromethyl-phenoxy)phenylacetic acid.

10. The method of Claim 9, wherein the alcoholic solvent is isopropanol.

1 11. The method of Claim 10, wherein about 0.47 molar equivalent or less
2 of (1R,2R)-2-amino-1-(4-nitrophenyl)-1,3-propanediol is used to form the acid-base salt.

1 12. The method of Claim 11, wherein said step (a) of producing a solution
2 comprising an enantiomerically enriched acid-base salt of (-)-4-chloro- α-(3-trifluoromethyl-
3 phenoxy)phenylacetic acid comprises heating the solution mixture to a temperature at or
4 above a nucleation temperature of the (-)-acid-base salt.

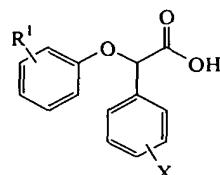
1 13. The method of Claim 12, wherein said step (b) of separating the
2 enantiomerically enriched acid-base salt is performed at a temperature near or above a
3 saturation temperature of an acid-base salt of the (+)-enantiomer.

1 14. The method of Claim 10, wherein the enantiomerically enriched
2 (1R,2R)-2-amino-1-(4-nitrophenyl)-1,3-propanediol comprises at least a portion of (1R,2R)-
3 2-amino-1-(4-nitrophenyl)-1,3-propanediol that is removed from the acid-base salt of said
4 step (c).

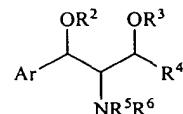
1 15. The method of Claim 10 further comprising racemizing at least a
2 portion of (+)-4-chloro- α -(3-trifluoromethylphenoxy)phenylacetic acid obtained in said step
3 (b).

1 16. The method of Claim 15, wherein the enantiomeric mixture of 4-
2 chloro- α -(3-trifluoromethylphenoxy)phenylacetic acid comprises at least a portion of (+)-4-
3 chloro- α -(3-trifluoromethylphenoxy)phenylacetic acid that is racemized.

1 17. An acid-base salt derived from a α -(phenoxy)phenylacetic acid
2 compound of the formula:



3 and a chiral amine compound of the formula:



4 wherein

5 R¹ is alkyl or haloalkyl;

6 X is halide;

7 each of R² and R³ is independently hydrogen or alkyl; or R² and R³ together
8 with atoms to which they are attached to form a heterocyclic ring moiety;

9 R⁴ is hydrogen or alkyl;

10 each of R⁵ and R⁶ is independently hydrogen or alkyl, or one of R⁵ or R⁶ is an
11 amine protecting group; and

12 Ar is aryl.

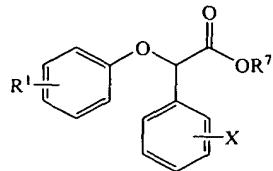
1 18. The acid-base salt of Claim 17, wherein the α -(phenoxy)phenylacetic
2 acid compound and the chiral amine compound are enantiomerically enriched.

1 19. The acid-base salt of Claim 18, wherein the α -(phenoxy)phenylacetic
2 acid compound is (-)-4-chloro- α -(3-trifluoromethylphenoxy)phenylacetic acid.

1 20. The acid-base salt of Claim 18, wherein the chiral amine compound is
2 (1R,2R)-2-amino-1-(4-nitrophenyl)-1,3-propanediol.

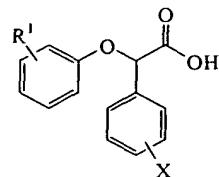
1 21. An enantiomerically enriched (-)-4-chloro- α -(3-trifluoromethyl-
2 phenoxy)phenylacetic acid having an enantiomeric excess of at least about 95%.

1 22. A process for enantioselectively producing a α -
2 (phenoxy)phenylacetate compound of the formula:



3 said method comprising:

4 (a) producing a racemic mixture of a α -(phenoxy)phenylacetic acid of the
5 formula:



6 (b) resolving the racemic mixture of the α -(phenoxy)phenylacetic acid
7 using less than 0.5 molar equivalent of an enantiomerically enriched chiral amine compound
8 to produce an enantiomerically enriched α -(phenoxy)phenylacetic acid;

9 (c) producing an enantiomerically enriched activated α -(phenoxy)phenyl-
10 acetic acid by contacting the enantiomerically enriched α -(phenoxy)phenylacetic acid with a
11 carboxylic acid activating reagent; and

12 (d) contacting the enantiomerically enriched activated α -(phenoxy)phenyl-
13 acetic acid with a compound of the formula $(R^5-O)_wM$ to produce the α -(phenoxy)phenyl-
14 acetate compound,

15 wherein

16 R^1 is alkyl or haloalkyl;

17 X is halide;

18 R^7 is heteroalkyl;

19 M is hydrogen or a metal; and

20 the subscript w is the oxidation state of M.

1 23. The method of Claim 22, wherein the α -(phenoxy)phenylacetate
2 compound is (-)-halofenate.